What Is Claimed Is:

1. A heat conductive silicone rubber composite sheet comprising a laminated structure with an intermediate layer and a pair of outer layers laminated to both surfaces of said intermediate layer, wherein

(A) said intermediate layer is a layer of a synthetic resin film that displays heat resistance and electrical insulation, and

(B) said outer layers are silicone rubber layers formed by curing a composition comprising (a) an organopolysiloxane, (b) a curing agent, (c) a heat conductive filler, and (d) a silicon compound-based adhesion imparting agent with at least one functional group selected from the group consisting of epoxy groups, alkoxy groups, vinyl groups, and the group represented by the formula Si–H.

2. The heat conductive silicone rubber composite sheet according to claim 1, wherein the thickness of said synthetic resin film is within a range from 5 to 40 μm.

3. The heat conductive silicone rubber composite sheet according to claim 1, wherein said synthetic resin film is formed from an aromatic polyimide, a polyamide, a polyamideimide, a polyethylene naphthalate, a polytetrafluoroethylene (PTFE), or a copolymer of tetrafluoroethylene and a perfluoroalkylvinyl ether.

4. The heat conductive silicone rubber composite sheet according to claim 1, wherein said synthetic resin film has a melting point of 200°C or higher.

5. The heat conductive silicone rubber composite sheet according to claim 1, wherein the thickness of each of said outer layers is within a range from 30 to 800 μm.

6. The heat conductive silicone rubber composite sheet according to claim 1, wherein said organopolysiloxane of said component (a) is represented by an average composition formula $R^1_aSiO_{(4-a)/2}$ (wherein, R^1 are each independently a substituted or unsubstituted monovalent hydrocarbon group of 1 to 10 carbon atoms, which are the same or different, and a is a positive number of 1.90 to 2.05).

7. The heat conductive silicone rubber composite sheet according to claim 1, wherein said organopolysiloxane of said component (a) has a backbone chain that comprises dimethylsiloxane units, or a backbone chain that comprises dimethylsiloxane units but a portion of the methyl groups are substituted with a vinyl group, a phenyl group, or a 3,3,3-trifluoropropyl group, and the molecular chain terminals of the backbone chain are blocked with a triorganosilyl group or a hydroxyl group.

8. The heat conductive silicone rubber composite sheet according to claim 1, wherein the degree of polymerization of said component (a) is within a range from 200 to 12,000.

9. The heat conductive silicone rubber composite sheet according to claim 1, wherein said curing agent of said component (b) comprises an organohydrogenpolysiloxane with an average of at least 2 hydrogen atoms bonded to silicon atoms within a single molecule, and a platinum catalyst, and said organopolysiloxane of said component (a) is an organopolysiloxane that contains at least 2 alkenyl groups bonded to silicon atoms within a single molecule.

10. The heat conductive silicone rubber composite sheet according to claim 9, wherein the quantity of said organohydrogenpolysiloxane is a quantity such that the quantity of hydrogen atoms bonded to silicon atoms within said component (b) is from 0.1 to 4.0 mols per 1 mol of alkenyl groups bonded to silicon atoms within said component (a).

11. The heat conductive silicone rubber composite sheet according to claim 9, wherein the quantity of said platinum catalyst is a quantity such that the quantity of the platinum metal within said component (b) relative to the quantity of said component (a) is within a range from 0.01 to 1,000 ppm (by weight).

12. The heat conductive silicone rubber composite sheet according to claim 1, wherein said curing agent of said component (b) is an organic peroxide.

13. The heat conductive silicone rubber composite sheet according to claim 12, wherein the quantity of said organic peroxide is within a range from 0.1 to 5 parts by weight per 100 parts by weight of said organopolysiloxane of said component (a).

14. The heat conductive silicone rubber composite sheet according to claim 1, wherein said heat conductive filler of said component (c) comprises an inorganic powder.

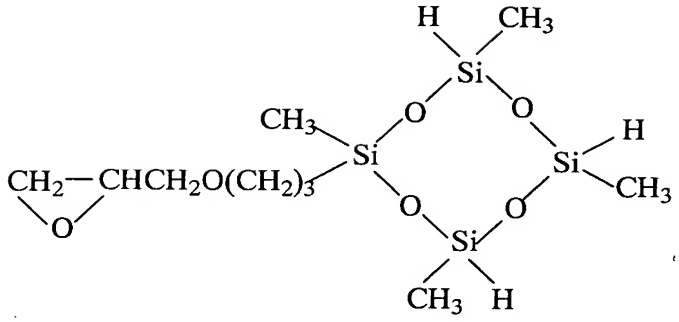
15. The heat conductive silicone rubber composite sheet according to claim 1, wherein the average particle diameter of said component (c) is no more than 50 μm.

16. The heat conductive silicone rubber composite sheet according to claim 1, wherein the quantity of said heat conductive filler of said component (c) is within a range from 100 to 1,800 parts by weight per 100 parts by weight of said organopolysiloxane of said component (a).

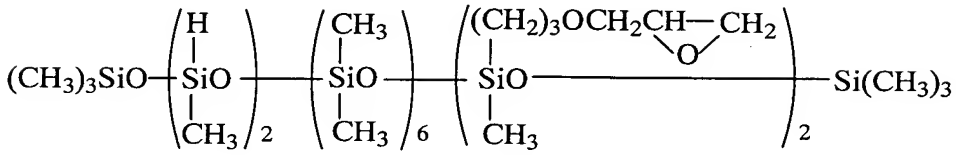
17. The heat conductive silicone rubber composite sheet according to claim 1, wherein said silicon compound-based adhesion imparting agent of said component (d) has at least 2 functional groups which are each selected from the group consisting of epoxy groups, alkoxy groups, vinyl groups, and the group represented by the formula Si–H.

18. The heat conductive silicone rubber composite sheet according to claim 1, wherein the quantity of said component (d) is within a range from 0.1 to 3.0 parts by weight per 100 parts by weight of said component (a).

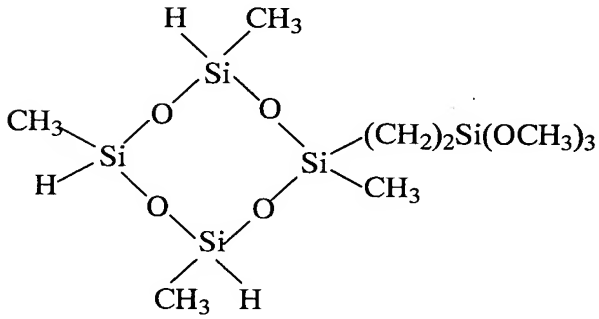
19. The heat conductive silicone rubber composite sheet according to claim 1, wherein said component (d) comprises at least one compound shown below:



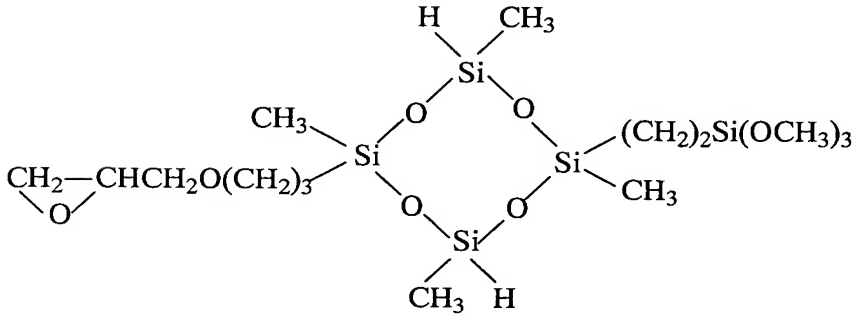
,



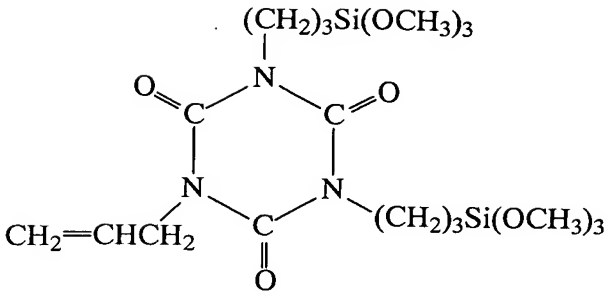
,



,



, and


(CH2)3Si(OCH3)3
N
O
C
C
O
N
N
CH2=CHCH2
C
(CH2)3Si(OCH3)3
O